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S. 1287 – Nuclear Waste Policy Amendments Act

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Reported from the Energy and Natural Resources Committee on June 25, 1999, by a vote of 14 to 6. S. Rept. 106-98; minority views filed.

NOTEWORTHY

- Following objection from Nevada's Senator Reid on Senate consideration of S. 1287 later this week, the Majority Leader today filed cloture on the motion to proceed to S. 1287. A cloture vote is likely to occur on Wednesday.
- Structured as a series of amendments to existing law, more modest in scope than bills from the 105th Congress, S. 1287 retains the existing policy of providing for the permanent storage of spent nuclear fuel and high-level radioactive waste, generated either by the commercial nuclear power industry or by the federal government, at a site known as Yucca Mountain, Nevada. The more comprehensive bill in the last Congress failed to surmount a filibuster: on June 2, 1998, 100 percent of Republicans voted for cloture and 93 percent of Democrats voted against cloture [Roll Call Vote 148].
- S. 1287 allows the Department of Energy (DOE) to enter into voluntary settlements to pay damages, as required by a 1997 federal court order, or to take title to spent nuclear fuel and continue to store it at utility generating stations until a permanent storage facility is completed.
- S. 1287 would eliminate the authority of the Environmental Protection Agency to set radiation protection standards for the repository and assign that responsibility solely to the Nuclear Regulatory Commission (NRC). In a statement by the President issued October 1, 1999, the President objected to this provision, and said he would veto the bill in its current form.
- The Nevada congressional delegation and the State of Nevada consistently have opposed placing a nuclear waste site at Yucca Mountain, adjacent to a remote site used by the federal government for nuclear weapons test explosions for 50 years. This site was approved by Congress in 1987 as the only candidate for a permanent repository.

HIGHLIGHTS

- ◆ S. 1287 establishes a schedule for a Department of Energy nuclear waste disposal program, including early acceptance of fuel that would commence as soon as the Nuclear Regulatory Commission approves construction of a repository, an action expected by 2007.
- ◆ The bill designates the Nuclear Regulatory Commission as the agency responsible for setting the radiation exposure standards for the waste repository consistent with specific criteria set forth in S. 1287. That authority currently lies with the Environmental Protection Agency.
- ◆ S. 1287 retains the 1 mil per kilowatt hour fee for the right to dispose of waste at the repository, established by the 1982 Nuclear Waste Policy Act as amended, and requires a joint resolution of Congress to raise or lower the fee.
- ◆ DOE is authorized to settle utility claims by taking title to spent fuel at reactor sites and compensating the company for the cost of storage, but the bill prohibits the use of the Nuclear Waste Fund to pay claims or for any purpose other than the purchase and transport of waste containers.
- ◆ The bill models its transportation provisions on those already in place for transportation of materials to the Waste Isolation Pilot Plant (WIPP) in New Mexico.
- ◆ On the House Union Calendar is H.R. 45 (H. Rept. 106-155), which is comprehensive legislation to rewrite the Nuclear Waste Policy Act and similar to legislation from the 105th Congress. It would require construction of an interim storage facility near Yucca Mountain to receive spent fuel from nuclear power plants, foreign research reactors, naval reactors, and high-level radioactive waste from defense activities.

BACKGROUND

Nuclear power plants provide more than 20 percent of the nation's electric generating capacity. Nuclear reactors were designed with on-site storage pools that were intended to serve as temporary storage facilities. A typical nuclear power plant produces about 30 tons of spent fuel annually. Currently, no permanent storage facility exists, so nuclear power plants must store their nuclear waste on-site. About 40,000 metric tons of spent fuel are now in temporary storage at nuclear power plants at 71 sites in 34 states.

DOE estimates that it will open a permanent repository by 2010. Even by that optimistic measure, a total of 85 reactors will no longer have room in their spent fuel storage pools. Many utilities with limited space in their storage pools have begun to search for alternative storage capacity. Twenty-three utilities have licenses for on-site dry canister storage at their reactors. In addition, a large number of utilities are attempting to negotiate with an Indian Tribe for storage on its reservation. Privately funded storage may be built only if the facility meets NRC certification standards.

In addition, 2,500 metric tons of spent nuclear fuel and 403,000 cubic meters of high-level nuclear waste had, as of last year, been produced by the federal government through defense and research activities. That spent fuel and waste currently are stored at DOE sites in 11 states. In all, nuclear waste is being stored in at least 80 sites in 41 states.

The 1982 Law

The Nuclear Waste Policy Act of 1982 required the DOE to design and implement a permanent geologic repository for spent nuclear fuel from commercial reactors but specified no site. DOE was given a deadline to begin accepting waste by 1998. The law also called for developing plans by 1985 to build a "monitored, retrievable storage" facility to relieve pressure on utility storage sites. (In 1985, the President determined that defense-related spent fuel could also be disposed of in the same repository.)

To pay for constructing and operating a permanent facility, the law established the Nuclear Waste Fund in the U.S. Treasury. It currently receives about \$800 million per year from collection of a fee paid by purchasers of nuclear-generated electricity and interest on the unobligated balance. The fund currently contains over \$15 billion in fees and interest with over \$1 billion more in fees accrued but not yet paid. In addition, defense funds are annually appropriated to cover the cost of storing defense spent fuel and waste.

The 1987 Law

In 1987, Congress passed the Nuclear Waste Policy Amendments Act as part of the 1988 deficit-reduction legislation and instructed the DOE to study the suitability of the Yucca Mountain site to serve as the permanent repository. That site was one of several DOE had previously identified. The 1987 law authorized DOE to move forward with so-called "site characterization" activities to evaluate the licensability of the site to serve as a repository. The law also authorized a monitored retrievable storage facility, contingent upon the permanent repository being sited and licensed.

The State of Nevada took the issue to court, asserting the state's authority to prevent DOE from proceeding with site characterization activities. Although Nevada lost in a case decided by the Supreme Court, the state succeeded in delaying site characterization activities for several years,

until 1991. Since enactment of the 1987 law, DOE has spent approximately \$4 billion characterizing the Yucca Mountain site.

As of the end of the second quarter of fiscal year 1999, DOE had spent more than \$6 billion in all, yet still failed to meet the 1998 deadline for the acceptance of spent nuclear fuel stipulated in contracts between DOE and utilities. DOE issued the "Viability Assessment of a Repository at Yucca Mountain," which concluded that the scientific data collected by the department reveals no "showstoppers," in DOE's words. The current "Civilian Radioactive Waste Management Program Plan, Revision 2" calls for the recommendation of a repository site to the President in 2001, and the submission of a license application to the NRC in 2002 — four years after the federal government was to have begun accepting waste *at an already constructed facility*.

Pending Litigation

Not surprisingly, protracted and expensive litigation has been brought on behalf of the utility companies because of the federal government's inability to fulfill its duties. The Department of Energy in 1994 admitted that it would be unable to meet that 1998 deadline for beginning to accept nuclear waste as required by the 1982 law. As a result of this, a lawsuit was filed by a group of state regulatory agencies, nuclear utilities, and state Attorneys General against DOE for breaching the contracts entered into under the 1982 law (*Indiana Michigan Power Company, et al. v. U.S. Dept. of Energy*). On July 23, 1996, the U.S. Court of Appeals for the District of Columbia decided the case, holding that DOE had an obligation to begin accepting spent nuclear fuel from civilian reactors by January 1998. After DOE subsequently acknowledged that it would be unable to meet this deadline, a second lawsuit was filed by a group of 46 state regulatory agencies and 33 utilities, asking the Court to suspend collection of the nuclear waste fee and order DOE to develop a program to take used nuclear fuel in 1998 (*State of Michigan, et al. v. U.S. Dept. of Energy*). On November 14, 1997, the Court ordered DOE to pay contractual damages. Damage estimates range into tens of billions of dollars.

Ten utilities have filed claims for damages at the U.S. Court of Claims totaling more than \$8.5 billion. The Court has already ruled in three of the cases that DOE owes the utilities damages with the amounts to be determined in separate hearings. So far, the utilities that have won their cases in the Court of Claims have shut down their reactors and no longer pay the per-kilowatt-hour Nuclear Waste Fee. Other utilities still paying the fee are to continue to pursue contract remedies with DOE. Those remedies likely will result in a credit to the fee, but the utilities view a credit to be an inadequate remedy and likely will seek monetary damages.

Whatever the outcome of the damages battle, credits or monetary damages, the impact on the federal budget will be significant. The nuclear energy industry estimates U.S. liability to be on the order of \$50 billion. The Administration has offered a settlement of sorts under which the United States would take title to the waste and assume responsibility for continued storage at the reactor sites, but this has less certainty than S. 1287.

The Radiation Standard

The 1992 Energy Policy Act called for a review by the National Academy of Sciences (NAS) of technical bases for public health and safety standards for a facility at Yucca Mountain, and EPA must — based on the report — issue standards that “prescribe the maximum annual effective dose equivalent to members of the public. . . .” Recently, EPA issued a draft regulation that, among other things, applies the Safe Drinking Water Act standard to groundwater around the Yucca Mountain site, whether or not that water is used as drinking water. For some radionuclides, the Drinking Water Standard is as low as a tenth of a millirem. In contrast, the NRC measures maximum annual radiation exposures to individuals from *all* sources, as required by the Energy Policy Act of 1992, including exposures from drinking water. S. 1287 would eliminate the authority of the EPA to set radiation protection standards for the repository and assign that responsibility solely to the NRC because the NRC standard is viewed by the Energy Committee Majority as adequate to protect public health.

BILL PROVISIONS

Title I — STORAGE AND DISPOSAL

Sec. 101 Program Schedule

This section sets forth the schedule for decisions regarding the permanent repository at Yucca Mountain. The dates are consistent with DOE's existing schedule for Yucca Mountain.

Subsection (c) requires the Secretary to submit to the Nuclear Regulatory Commission an application for a license for surface facilities to receive and possess spent fuel and high-level waste at the Yucca Mountain site at the same time as the submission of the application for the construction authorization for the permanent repository. If the application for surface facilities meets the NRC's requirements, the NRC is required to issue a license for surface facilities concurrent with the issuance of the construction authorization for Yucca Mountain, or as soon as practicable thereafter. This should allow DOE to accept spent fuel and nuclear waste by 2007.

Sec. 102 Backup Storage Capacity

This section authorizes the Secretary to enter into an agreement with a utility that must shut down its reactor because it is unable to build adequate on-site storage for spent fuel. It authorizes the Secretary to take title to the fuel at the reactor site and give priority to the transportation of the fuel when the early acceptance facility at Yucca Mountain becomes available, or to transport the fuel to a private NRC-licensed independent fuel storage facility.

Sec. 103 Radiation Protection Standard

This section authorizes the NRC to set a radiation protection standard consistent with the existing NRC rule for Yucca Mountain, and that takes into account the National Academy of Sciences' recommendations (64 Federal Register 8640, 2/22/99).

Sec. 104 Nuclear Waste Fee

The Nuclear Waste Policy Act of 1982 allowed the Secretary of Energy to adjust the Nuclear Waste Fee, subject to the disapproval of either house of Congress. Such "one-house veto" provisions were subsequently held unconstitutional. The section clarifies that an adjusted fee proposed by the Secretary shall only be effective upon enactment of a joint resolution by Congress.

Sec. 105 Settlement Agreements

This section authorizes the Secretary of Energy to enter into settlement agreements to resolve claims relating to the Secretary's failure to dispose of spent nuclear fuel and high-level waste beginning not later than January 31, 1998, as required by the Nuclear Waste Policy Act of 1982. The Secretary may settle the claims by taking title to the fuel at the reactor sites and providing storage casks to the contract holder or compensating the contract holder for his costs of on-site storage. The section prohibits expenditures for the Nuclear Waste Fund for settlement purposes.

Title II — Transportation

Title II carries forward the transportation provisions contained in S. 608 introduced earlier this year by Senators Murkowski, Craig, and others. The provisions contained in this title provide special considerations for routing decisions, funding and curricula for training of transportation personnel and emergency responders, and grants for state and local governments and Indian tribes along the transportation routes. These provisions are modeled upon those in place for transportation of material to the Waste Isolation Pilot Plant in New Mexico. For a detailed description of the transportation requirements contained in Title II, please refer to pages 18 through 24 of Senate Report 106-98.

Title III — Development of National Spent Nuclear Fuel Strategy

The Nuclear Waste Policy Act of 1982 set up a selection process for permanent geologic repositories for spent nuclear fuel. In 1987, the Act was subsequently amended to allow consideration only of Yucca Mountain. No studies of alternatives to permanent geological burial of spent fuel are authorized. The Act sets up the Office of Civilian Radioactive Waste

Management with the sole function of qualifying a repository and permanently disposing of the spent fuel.

This provision, proposed by Senator Domenici, authorizes an Office of Spent Nuclear Fuel Research with the charter to study "treatment, recycling, and disposal" of spent fuel with emphasis on minimizing health risks to the general public from proximity to site workers, minimizing proliferation concerns, and studying cost-effective technologies. It specifically requires study of reprocessing and transmutation (by both accelerators and reactors) and requires international participation.

ADMINISTRATION POSITION

The Administration had not issued a Statement of Administration Policy at the time of publication of this paper. However, the President repeatedly has said publicly that he would veto such legislation if it did not comport with his concerns. Secretary of Energy Richardson wrote to Chairman Murkowski on June 15, 1999, saying "Let me reiterate the Administration's opposition to any legislation that would make a decision to place an interim storage facility in Nevada prior to the completion of the scientific and technical work necessary to determine where a final repository will be located." On October 1, 1999, the President issued a statement (issued by his press secretary) saying he would veto the bill if it is presented to him in its current form, contending the bill will not adequately ensure the protection of public health and safety.

MINORITY VIEWS

The Minority Views, filed by Senator Bingaman, raises a number of objections to the bill as reported. First and foremost is the Senator's objection to cutting EPA out of the process for writing the radiation standard and vesting that authority in the NRC.

Also, the Senator believes that the backup storage solution in Section 102 is unworkable. The section requires DOE to enter into contracts to store spent nuclear fuel for utilities that run out of onsite storage space, but it allows DOE to store the waste only at the repository site or at a privately owned interim storage site and not another federal site. For elaboration of the Minority views, refer to pp. 27-29 of the Committee Report.

COST

The Congressional Budget Office (CBO) estimates that implementing the legislation would cost about \$1.9 billion over the 2000-2004 period to continue DOE's efforts to characterize the Yucca Mountain site and submit a license application to the NRC. Enactment of the bill would not, according to the CBO, affect direct spending or receipts; therefore, pay-as-you-go procedures would not apply.

REGULATORY IMPACT

The Committee expects little or no regulatory impact as a result of this legislation.

POSSIBLE AMENDMENTS

If cloture is invoked on the motion to proceed and the Senate is able to turn to S. 1287, Senator Murkowski is expected to introduce a managers' amendment.

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